DOCUMENT RESUME

ED 154 914 PS 009 927

AUTHOR Weininger, O.; Moll, M. J.
TITLE Preliminary Report on Aggressive Behaviours as Observed in 12, 18 and 24 Month Old Infants.
PUB DATE [77]
NOTE 20p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Age Differences; *Aggression; *Infant Behavior; Infants; *Interaction Process Analysis; Observation; Overt Response; *Peer Relationship; Reactive Behavior; Sex Differences; Toys; Video Tape Recordings

ABSTRACT

This study was designed to identify aggressive actions in 12-, 18-, and 24-month-old infants and to investigate what type of responses these actions elicit in peers. Nine infants were observed and videotaped in interaction with each other and with toys. The focus was on four 18-month-olds observed in two sessions, one with an older child, the second with a younger child. The infants' mothers were present at each session. An observational instrument was devised to record the actions of the infants. This instrument consisted of an observation schedule with a list of five aggressor behaviors on the vertical axis and a list of ten aggressee responses on the horizontal axis of one schedule, and the three ages involved across the horizontal axis of a second schedule. Results indicated that the range of aggressor/aggressee patterns was limited. The most frequently occurring aggressor behavior in young infants was take-tug-grab, and the aggressee response was either to retrieve the object taken or to go to the mother. Sex and age differences in aggressor/aggressee behavior are discussed. (CM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED154914

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

PRELIMINARY REPORT ON AGGRESSIVE BEHAVIOURS AS OBSERVED IN 12, 18 AND 24 MONTH OLD INFANTS.

O. Weininger, Ph.D.
Department of Applied Psychology
Ontario Institute for Studies in Education

and

M.J. Moll

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

O. Weininger

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

PS 009927

While there has been some work on the aggression-submission hierarchy in 2, 3 and 4 year olds, (Sluckin and Smith, 1977) there has been very little work reported on the aggressive behaviours observed in 12 to 24 month old children. The aggressive behaviour that is usually observed in the nursery is usually considered as an attempt to establish the dominant hierarchy - the "king-pin" of the nursery, or perhaps as we have observed it, of the dyad. Generally the very young child is playing near another and is determined to get something that the child near him is playing with - the resultant behaviours are generally aggressive with the winner usually being judged as the dominant child for that interaction. Krebs (reported by Sluckin and Smith, 1977) notes a "good consistency among the hierarchies from 25 behaviours such as hitting, pushing, kicking and object-taking". However, we think that further detailed observations of aggressive behaviour in very early childhood have to be made in order to obtain a more realistic assessment of the development of the dominance hierarchy, and that we have to define the aggressive behaviours with greater precision.

Erickson (1950) indicated that a certain amount of aggressiveness is necessary for the growing child to achieve a sense of autonomy and a sense of initiative. Henry (1952) argued that the infant's grabbing for things, such as the mother's breast, or her fingers, or the infant's rushing, such as drinking very fast, gobbling his food, are behaviours that are encouraged by his mother's attitude. Aggressive

behaviour as for example grabbing and gobbling seem to be behaviours which are either valued by the mother and encouraged by her (Weininger, 1975) or are values of a culture which puts a premium on aggressiveness (Bettelheim, 1969). Certainly the aggressive behaviour is not just genetic potentiality for the POTENTIALITY "it seems, will not amount to much if they are not provided with the appropriate environmental stimuli in which to develop" (Montagu, 1977, p.9).

The following study was therefore designed to try and identify what actions in very young children are included in a definition of aggression and as well what type of responses these overt actions elicit in peers. The categorization used by Jones (1972) and McGrew (1972) appear to provide an empirical basis to observe action behaviour and co-occurrence of behaviour.

PROCEDURE

Videotapes of children who had participated in an infant-interaction study conducted by Ross (1974) were utilized in this research. The interaction an eighteen-month-old infant had when he was placed in an environment with either an older infant or a younger infant.

The eighteen-month-olds came for two sessions. One session would be with an infant twenty-four months of age, and another session would be with an infant twelve-months of age. Thus, in one instance he was the younger of the pair, and in the other instance he was the

older of the two.

On arriving at the laboratory mothers and infant(s) spent a few minutes while the Experimenter* (E) filled out a biographical sheet on the S's family and background. This gave the S and the mother an opportunity to get to know the E and to familiarize themselves with the surroundings.

Following this adaptation period, the mother and the S were led to the experimental location. The mother sat on the appropriate cushion. The mother and the eighteen-month-old S were the first to enter the experimental room, while the second mother and either a twelve-month-old or a twenty-four-month old entered the experimental room a few seconds later. The second mother sat on the remaining cushion and placed her infant in front of her. The closing of the experimental room door started the trial.

Each mother was instructed to remain seated during the trial, doing nothing that would keep her infant with her or away from her, but rather allowing the infant the freedom to do as he/she wished. They could smile and look at their infant, offer physical support, and say a few words when the infant was near her.

The toys were arranged in two rows across the room from where the mothers sat, and the infants were given twenty minutes to use these toys in any way they wished.

* E is M. J. Moll

As the two Ss interacted over the toys they were videotaped by E. The total number of infants who participated in the following study was nine. These nine videotaped Ss were divided into three age groupings of two twelve-month-olds, four eighteen-month olds and three twenty-four month olds. Each grouping included children of both sexes.

The interactions of these nine Ss were recorded on a coded Aggressor-Aggressee Recording Instrument.

Apparatus

The apparatus consisted of one large room, unfurnished. Illumination appeared adequate and the room temperature was comfortable. The room was 12.3825 square meters in area. Immediately to the right of the entry were two square sections (1.21m x 1.21m each) marked off on the floor. A cushion (.6m x .6m) was placed in each square with one side touching the wall of the room and approximately in the middle of the respective square. These two cushions within the two squares were the mother's positions during the experiment, and were the infants' starting positions. The mother or the eighteen-month-old always sat on the cushion farthest from the door.

The distance from the square containing the cushion to the first rwo of toys was 1.21m, and to the second row of toys the distance was 1.52m.

Two sets of comparable toys were used. Set One consisted of blocks, two telephones, a ladybug puzzle/pull toy, farm animals book, a shoehouse pull-toy with wooden people, a xylophone, an hour glass, a stuffed animal (Pluto) and a green ball. Set Two was made up of blocks, two telephones, a turtle puzzle/pull toy, an animal babies book, a Goldilocks house pull toy with wooden bears, a bell, a dog on wheels, a stuffed animal (Walrus) and an orange ball.

The experimental sessions were videotaped, with two cameras, one for close-up and the other for the room proper. The tapes were with and without sound. A two-part observation instrument was designed to facilitate the recording of observations, (Figure 1). This observation schedule was designed with a list of aggressor behaviours on the vertical axis and a list of aggressee responses across the horizontal axis of one schedule, and the three ages involved across the horizontal axis of a second schedule. The E made pencil marks in the appropriate squares upon observing a specific aggressor behaviour. For example, if an infant exhibited an aggressor behaviour such as take-tug-grab, and the infant, who was aggressed against, responded by returning to his mother, then the pencil mark was recorded in the horizontal axis square "going to mother" and the vertical axis of "take-tug-grab".

Each subject thus had one two-part observation schedule on which the aggressor behaviour/aggressee response sequence was noted as

Figure 1

Aggressor-Aggressee Recording Instrument

Aggressor Behaviours	Aggressee Responses: Goes to Mother	Immobile	Observes	Retrieves	Weeps	Repels	Forearm Raise	Turns	Ignores	Lean Back
face thrusting										
kicks (toys)										
pushing (leaning)										
take-tug-grab										
throw (soc. dir.)										
throw (underarm)										

Age of Subjects

Aggressor Behaviours	12 mos.	18mos.	24mos.
face thrusting			
kicks (toys)			
pushing (leaning)			
take-tug-grab			
throw (soc. dir.)			
throw (underarm)			

well as the age at which the aggressor behaviour occurred.

The Observation Schedule

The two-part observation schedule was derived from the ethological literature. While the definition of aggression is complex, and researchers are divided as to what in fact aggressive acts consist of, McGrew (1972) elaborated upon what was involved in specific aggressive behaviours by explicitly defining the actions. For example, where Patterson, Littman and Bricker (1967) simply had the term "punching", McGrew divided punching into several categories, such as "punch side", "incomplete punch", "open punch" and "object punch". Such explicitness eliminates a sense of vagueness in terms of what is included when speaking about punching behaviour.

Jones (1972) has an even tighter definition for his category of aggression. He uses the terms fixate, frown, hit, push, take-tug-grab. However, some of these actions are fairly difficult to observe (such as fixate and frown) in a sequence. Thus, of these five items, the take-tug-grab sequence was included in the observational schedule.

Patterson et al (1967) provided a partial definition of what might be involved in assertive-aggressive behaviour. Such items as "jumping on", "grabbing", "choking", and "attacking with an object" were included on the schedule.

Aggressor Behaviours Definitions:

Face Thrusting: The head is moved rapidly forward so that the face is vertical and the chin juts out and up. Face thrusting occurs in agonistic interactions among nursery children. Dominant individuals exhibit it toward subordinates in threat, usually accompanied by verbalization, frowning and leaning forward of the body. It occurs early in agonistic encounters before physical attack, but if physical attack does not follow, both individuals sometimes spend the encounter time face thrusting (McGrew, 1972).

Kick: The leg is flexed and then rapidly extended at the knee and hip so that the foot moves forward toe first. It is usually oriented toward an object or person. In a standing posture the other leg remains upright, supporting the body; if occurring while sitting, both legs may be kicked simultaneously or alternately.

Kicking occurs in agonistic and quasi-agonistic interactions between children. During property fights it is often directed to the other's shins, but striking with the arms occurs more commonly. Kicking of objects by individuals occurs after losing property fights or suffering other 'frustrations'. Such kicks are forceful and close to the ground and directed toward objects (McGrew, 1972).

Push: The arms are extended forward, usually in parallel and horizontal position, with the wrists flexed and the vertical palms preceding. Force is directly applied to an object or person. Pushing most commonly occurs when the trunk leans forward while standing or sitting, but it

may also be combined in forward upright locomotion. Pushing is a common aggressive pattern in children and appears early in infants; for example, the infant pushing away the unwanted bottle or breast. In nursery schools pushing is used forcibly to move other children away from desirable objects or out of desirable spaces (McGrew, 1972, p.82).

Take-Tug-Grab: A combination (any one or more) of the following three:

1) taking an object from someone's hands (or an object which they are obviously using) when they have not held it out towards the subject;

2) tug is holding and pulling object which another is also holding and does not immediately release; and

(3) grab is a faster version of taking and often without resistance from the other. (Jones, 1972, p.105).

Throw: The forearm is extended forward, hand with palm down, above shoulder level and usually overhead, imparting force to a released object. Socially directed throwing (so that the object becomes a weapon) occurs in both agonistic and quasi-agonistic social interactions (McGrew, 1972, p.85).

Underarm Throw: The forearm is extended forward, hand with palm below shoulder level (and usually below the waist), imparting force to a released object. Underarm throwing is used by nursery children similarly to Throw. The differential use appears when the thrower is a subordinate individual or concurrently exhibits other fearful behav-

iour patterns. It involves less movement and is less obvious (and therefore less provocative) than socially-directed throwing (McGrew, 1972, p.86).

Aggressee Responses

Going to Mother: The child turns and goes to mother when aggressed against. Physically touches mother either by climbing onto the mother's lap, or touching the mother's body with his hands.

Immobile: Gross movement of the trunk and head ceases for at least three seconds. Often the gaze is fixed. The fingers may continue to move, often in automanipulation, but the movements are restrained and inconspicuous. Immobility may occur in any posture, but most commonly while standing or sitting (McGrew, 1972, p.89).

Observes: Looks for a long time at another child's face or hands or both (Jones, 1972, p.106).

Retrieve: The child would move to take the taken object back, grasp it and carry it away.

Weeps: The lacrymal glands secrete excessively so that the eyes become watery and tears spill over the eyelids. Usually occurs along with vocalization (McGrew, 1972, p.67).

Repels: The arms are spasmodically extended away from and in front of the body, not necessarily horizontally, hands open and palm first.

The movements are usually rapidly repeated and accompanied by negative expletives. Repelling movements occur in children's agonistic interactions. They seem to mean "get away!" and are exhibited by aggressed-against children (McGrew, 1972, p.83).

Forearm Raise: The forearm is raised to a horizontal position over or in front of the head; the elbow is partially flexed at approximately ninety degrees (McGrew, 1972, p.75).

Turn: The trunk is partially rotated, usually in a single continuous motion. When seated, the child's shoulders are rotated although the buttocks may remain unmoved. While standing the child's shoulders and buttocks and usually the feet are rotated. Turning can be toward another child or away from another child. Both occur in agonistic interaction (McGrew, 1972, p.104).

Ignores: The child Turns away from another child and continues the activity he is engaged in.

Lean Back: The trunk is extended at the hips so that the head and shoulders move backward. It results in the trunk being moved from a flexed forward position to upright or on to a maximal flexion with the trunk tilting backward. It is usually oriented away from another person (McGrew, 1972, p.99).

RESULTS

Table 1 indicates that the most frequently occurring aggressor behaviour in 12, 18 and 24 month old infants is take-tug-grab; i.e.

Table 1

Total Number of Aggressor/Aggressee Behaviours

Aggressee Responses	Aggressor Behaviours: Face Thrust	Kicks Objects	Pushing Lean	Take Tug Grab	Throw Socially Directed	Throw Under-Arm	Total Aggressee Responses
Going to Mother		3		9			12
Immobile		1		2			3
Observes	1			3	6		10
Retrieves				16	1		17
Weeps				2			2
Repels				2	3		5
Forearm Raised				1			1
Turns			1				1
Ignores						1	1
Leans Back			1				1
Total Aggressor Responses	1	4	2	35	10	1	53

during the twenty minute period of observation take-tug-grab behaviour occurs 66.04% of the time. The usual response to this action is retrieving. This aggressee response occurs 32.08% of the observation time. The next most frequently occurring response to take-tug-grab is going to mother, (22.64%). While there are other aggressee behaviours to take-tug-grab, these occur with lesser frequency in this age sample. It would appear then that the most usual aggressor response in young infants is take-tug-grab and the aggressee response is either to retrieve or to go to mother.

Socially directed throwing occurs 18.86% of the time, and the aggressee reaction is usually to observe the other infant and to a lesser extent, to show repel behaviour.

Infants of this age also show kicking action as an aggressive act, but again to a much lesser extent (7.54%) and the aggressee behaviour is usually going to mother.

Table 1 tends to indicate that infants of 12, 18 and 24 months have a greater repertoire of aggressee responses than aggressor behaviours.

Take-Tug-Grab Aggressor Behaviour

Table 2 indicates the number of take-tug-grab behaviours that occurred by age and sex.

Table 2

Take-Tug-Grab Aggressor Behaviour

Age and Sex / Behaviour	12 Months		18 Months			24 Months		
	M	F	M	M	F	M	F	F
Take-Tug-Grab	8	3	7	3	2	5	4	3

While it is difficult to make statistical comparisons because of the small sample size, it does appear that males are more aggressive than females even at 12 months of age. The total number of take-tug-grab behaviour is almost twice as much for boys than for girls.

The aggressee response of going to mother is different for boys and girls. Girls go to mother more frequently than boys; eighteen-month old infants go to mother more often than twelve-month-old infants. There were no observed responses of going to mother in the 24 month old infants.

Take-Tug-Grab and Retrieval Behaviours

Out of a total of 35 take-tug-grab aggressor behaviours observed, 16 aggressee responses were to retrieve the taken object. This means that 45.7% of the time when an infant was aggressed against, the response was to retrieve or take back the taken object. The observations indicate that boys retrieved taken objects more often than girls, and that eighteen-month-old infants retrieved taken objects more often

than girls, and that eighteen-month-old infants retrieved taken objects more often than either the twelve-month-old or twenty-four month-old-infants.

Throwing (Socially-Directed) and Observe Behaviours

The socially-directed throwing aggressor behaviour was observed to occur ten times out of a total of 53 possible times and elicited an aggressee response of standing by to observe the aggressor and his throwing six times out of a total of 53 possible times, 60% of the time the infants response to socially-directed throwing is to stand by and observe.

When analyzed by sex and age, it was observed that boys exhibited an observe response more often than girls when socially directed throwing occurred, and that eighteen-month-olds exhibited more observe responses than did either the twenty-four-month-old or twelve-month-old infants.

DISCUSSION

While the observations of the present report indicate that infant boys are more aggressive than infant girls, these findings must be tempered by the small size of the sample. Further, it does appear that there is a limited range of aggressor/aggressee behaviours observed in young infants. The present observation instrument, while providing a behavioural record of infants' aggressive behaviour, might in fact have to be further detailed in order to determine the scope of infant aggressive behaviour. The present behavioural record

is a start, and now more detailed observations have to be performed. Perhaps physiological measures of lymphanic membrane and cardiac activity will allow us to become more detailed.

The total number of aggressor behaviours recorded were 53. There were 240 minutes of take, which means that an aggressor behaviour occurred on the average of one every 4.5 minutes. When compared with Patterson, Littman and Bricker (1967) who reported 2,538 aggressive behaviours in 9,000 minutes of observation, an aggressive act every 3.5 minutes, our finding of one every 4.5 minutes is less. Age differences might account for the fewer amount of aggressor behaviours exhibited by the children in this study. A conclusion might be that we simply did not find as many aggressor behaviours exhibited as other studies have reported. Further, we should be critical here as to whether what was observed could in fact be called aggressive behaviour. Jones (1972) notes that "children seem to take (objects from one another) almost as a sign of interest in others ..." He goes on to say that even though the taking has evoked a response from the victim, the taking is not always motivated with an intent to harm or hurt.

Piaget notes that twelve-to eighteen-month-old infants are establishing object interaction schemas and are thus involved in a lot of mouthing and/or taking of objects for exploration (Piaget, 1954).

SUMMARY

The present study was designed to observe the aggressor/ aggressee behaviour in 12, 16 and 20 month old infants. Nine infants were observed in interaction with each other and toys. An observational instrument was devised to record the actions of the infants. While aggression behaviour occurred, the range of patterns appeared limited, and generally young infants display take-tug-grab aggressor action with subsequent aggressee behaviour of retiring and going to mother.

REFERENCES

Bettelheim, B. Children of the Dream. New York; MacMillan Company, 1959.

Erikson, Erik. Childhood and Society. New York; W.W.Norton and Company, 1950.

Henry, J. Child Rearing, Culture and the Natural World. Psychiatry, 1952, 15.

Jones, N. Blurton. Ethological Studies of Child Behaviour. London, Cambridge University Press, 1972.

McGrew, W.C. An Ethological Study of Children's Behaviour. New York; Academic Press, 1972.

Montagu, A. Human Aggression. The Sciences, 1977, 17(8), 6-11, 30.

Patterson, G.R., Littman, R.A. and Bricker, W. Assertive Behaviour in Children. Child Development, 1967

Piaget, J. The Construction of Reality in the Child. New York, Basic Books, Inc., 1954.

Ross, H.S. The influence of novelty and complexity on exploratory behaviour. J. of Experimental Child Psychology, 1974, 17(3), 436-451.

Sluckin, A.M., and Smith, P.K., Two approaches to the concept of dominance in preschool children. Child Development, 1977, 48, 917-923.

Weininger, O. Dominance in children. In Kontos, A. (Ed.). Domination, Toronto, University of Toronto Press, 1975.